



# **DANVILLE & ELLSWORTH PARK DAM MODIFICATION**

## **FREQUENTLY ASKED QUESTIONS**

### **How will the removal of the dams affect the flow in the Vermilion River and North Fork Vermilion River?**

The same amount of water will flow in the Vermilion River and the North Fork Vermilion River with or without the dam. The removal of a dam does not impact the amount of water flowing in a river. The removal of a dam will remove any permanent pool that may exist behind a dam.

### **What will the river look like if the dam is removed?**

The best predictor of what the river would look like without a dam is to view the river in a reach that is not influenced by the dam; either upstream or downstream of the dam.

### **Will the river be invaded by Asian carp if the dam is removed?**

Neither the Ellsworth Park Dam nor the Danville Dam is a deterrent to migration of Asian Carp. Asian Carp can jump 8 to 10 feet in the air while the dam is less than 6 feet above water. The Danville Dam is also submerged on an annual basis and it also has a facility on the left bank for fish passage that would allow Asian Carp to migrate upstream of the dam. Additionally, Asian Carp prefer slow moving water and are more likely to be present with the dam in.

### **How much of the river will be impacted by removal of either dams?**

Removal of the Danville Dam impacts a reach of river approximately 1.5 river miles upstream. The confluence of the Middle Fork and the Vermilion River is 6.5 river miles upstream and will not be impacted. The removal of a dam has very little impact on the reach of the river downstream of the dam.

### **Does the Danville Dam serve any useful purpose or provide any beneficial functions?**

The only function of the Danville Dam is the creation of an artificial pool of flat water for recreational use.

### **Will recreation on the river still be possible if the dams are removed?**

Recreation on the Vermilion River will still be possible with less percentage of opportunities for motorized boating and more opportunities for personal watercraft. There will be times that river levels will be sufficient for motorized boats and they will have the ability to access the reach of the river downstream of the dam. The quality of recreational fish present upstream of the dam site would improve fishing opportunities in that area if the dam were removed. A large stretch of river downstream of the dam would be opened up to personal watercraft users by removal of the dam.

## **Who will pay for the removal of these dams?**

The removal of the Danville Dam and the Ellsworth Park dam were identified by Governor Quinn as part of his Dam Removal Initiative of 2012. The State of Illinois General Assembly has appropriated funds to the Illinois Department of Natural Resources for dam removal; these funds are from bond sales that are part of the Governor's "Jobs Now" program. The City of Danville would be required to provide the rights-of-way required for the dam removals and any utility relocation required. The State of Illinois, through the Department of Natural Resources, would be responsible for the design and implementation of the dam removal project and any associated river work.

## **Why is there an interest in removal of these two dams?**

The dam removal process has been going on for 9 years as shown below.

- 2004 - Mayor formed dam technical committee after a drowning at the Danville dam
- 2006 - IDNR Dam Public Safety Initiative began
- 2007 - Evaluation of Public Safety at Run-of-River Dams published by CTE/AECOM
- 2009 - IDNR began Strategic Study of Danville Dam & Ellsworth Park Dam
- 2012 - Governor's Dam Removal Initiative announced (16 dams)

The State of Illinois is also interested in providing ecological restoration and recreational opportunities.

## **Are warning signs effective in reducing safety hazards and liability?**

A recent court case in Illinois found that the owner of a dam had some liability from a drowning at the dam even though the dam was on a stretch of river that was not opened to the public, there were signs warning people to not trespass on the dam owners property (the river), there were warning signs indicating the presence of the dam and the people who were in the watercraft had been drinking. Putting up signs does not protect a dam owner from liability for accidents that happen at the dam.

## **If the City of Danville chooses to go with the rock ramp or stepped spillway removal alternative will the State still participate in the project?**

The funding from the Governor's Dam Removal Initiative is limited to the recommendation presented in the IDNR report.

## **Will the removal of the dams expose large areas of mud that will be visually unappealing?**

The river bottom consists of sands and gravels so there will not be any significant mud flats.

## **Why is the cost of partial removal of the Danville Dam more expensive than full removal?**

The additional cost of the partial removal are for the rock placement along the channel banks in the vicinity of the dam to transition the existing channel bed from the upstream to downstream shape. This also helps with the stability of the river banks. The full remove must excavate the upstream material and does not require work to stabilize the river banks.

## What fish species can be expected to move upward on the river if the dam is removed?

The following table shows the results of two fish sampling periods. It can be seen from this data that there are significantly more fish found below the dam than found above the dam.

Sampling	2004 Upstream	2004 Downstream	2011 Upstream	2011 Downstream
#Species	23	37	22	39
Largemouth Bass	1	10	6	1
Smallmouth Bass	0	5	2	8
Spotted Bass	1	0	0	0
Crappie	1	17	0	8
Bluegill	7	38	3	7
Channel Catfish	2	13	0	23
Flathead Catfish	3	6	1	1
Walleye	0	3	0	1
Big Eye Cub	0	1	0	0
River Redhorse	0	2	0	7
Eastern Sand Darter	0	0	0	2
Fish Abundance	258	677	554	1,000

## Are there any endangered fish species that need the pool created by the dam to survive?

There are no endangered or threatened fish species that require the pool of the dam to survive. All endangered fish species in the area require quick moving water with riffles for habitat. The following is a list of endangered fish species:

- Bluebreast Darter (*Ethostoma camurm*)
- Eastern Sand Darters (*Ammocrypta pellucidum*)
- Bigeye Chub (*Hybopsis amblops*)
- River Redhorse (*Moxostoma carinatum*)
- Wavy-rayed Lampmusel (*Lampsilis fasciola*)
- Black Sandshell (*Ligumia recta*)

## What are the costs of the various alternatives studies by IDNR?

Alternative	Danville Dam Alt. Costs	Ellsworth Park Dam Alt. Costs
1 - Full Removal	\$1,464,300	\$275,500
2 - Partial Removal	\$1,832,000	\$198,900
3 - Stepped	\$3,725,600	\$1,043,100
4 - Rock Ramp	\$2,706,700	\$1,080,400
5 - Do Nothing	\$0	\$0
Recommended	\$1,832,000	\$275,500

## **What would the average width and depth of the North Fork be during a normal flow condition and what is it with the Ellsworth Park dam in place?**

Upstream of the Main Street/US 150 Bridge the water surface will drop less than 18 inches on normal flow conditions. Downstream of the Main Street/US 150 Bridge the water surface will drop less than 4 feet. This equates to an average depth going from 4.4 feet to 3.1 feet. During normal flow the average width will go from 108 feet to 89 feet.

## **Was the selection of IDNR's preferred alternative based solely on economics?**

The recommended alternatives were selected based on their abilities to meet the goals of public safety, ecosystem restoration and recreation enhancements as well as economics.

## **Will the boat ramp at Ellsworth Park still be useable?**

The percentage of time that the boat ramp will be useable in its existing configuration will be reduced. See the following table.

Water Depth on Ramp (ft)	Submerged Length (ft)	Frequency Depth will be exceeded		
		Existing	Initial Removal	Long Term Removal
0	0	100%	100% *	78%
1	5	99%	99% *	45%
2	10	85%	59%	27%
3	15	58%	23%	16%
4	20	30%	12%	9%
5	25.8	15%	7%	5%
6	32.5	8%	4%	4%

*\*Water depth at confluence may limit access to the Vermilion River*

## **Who else has to approve of the removal of the dams before the project could start?**

Permits would be required from the U.S. Army Corps of Engineers, the Illinois Environmental Protection Agency and the Illinois Department of Natural Resources/Office of Water Resources. There may be other local permits such as from a soil and water conservation district that might be required.

**Written comments concerning the Strategic Planning Study and study recommendations may be e-mailed to the Department of Natural Resources, Office of Water Resources at [dnr.dworm@illinois.gov](mailto:dnr.dworm@illinois.gov) until May 15, 2013.**